

LISTING OF THE CLAIMS

Applicants hereby present the claims, their status in the application, and amendments thereto as indicated:

1. (Currently Amended) In combination, a light source and a subject, wherein the light source has an illumination spectrum characterized by a distinctively stronger emission peak at a predetermined wavelength within a visible spectrum compared to other wavelengths; and,

the subject has a pigment applied thereto, wherein the pigment has a reflection spectrum characterized by one of a distinctively stronger reflection peak at the predetermined wavelength compared to said other wavelengths and a distinctively weaker reflection gap at the predetermined wavelength compared to said other wavelengths;

wherein the pigment gives the subject a distinct appearance when illuminated by the light source, due to the emission peak matching one of the reflection peak and the reflection gap, as compared to a nominal appearance when illuminated by an alternate light source which does not include the distinctively stronger emission peak at the predetermined wavelength as compare to said other wavelengths; and

wherein the emission peak corresponds to a primary color, and the illumination spectrum is further characterized by at least one additional distinct emission peak, such that the illumination spectrum provides simulated broadband illumination.

2. (Canceled)

3. (Previously Presented) In combination, a light source and a subject, wherein,

the light source has an illumination spectrum characterized by a plurality of narrow peaks within a visible spectrum;

the subject has a pigment applied thereto, wherein the pigment has a reflection spectrum characterized by one or more reflection gaps;

the pigment gives the subject a distinct appearance when illuminated by the light source due to a color shift from at least one of the narrow peaks matching one or more

of the reflection gaps, as compared to a nominal appearance when illuminated by a broadband light source.

4. (Currently Amended) The combination of claim 3, wherein the pigment is further characterized by a plurality of reflection peaks interspersed between ~~the one~~ two or more of the reflection gaps.

5. (Previously Presented) The combination of claim 3, wherein the narrow peaks correspond to primary colors.

6. (Previously Presented) The combination of claim 5, wherein the narrow peaks include at least red, green and blue peaks, and wherein one of the reflection gaps substantially corresponds to the green peak.

7. (Previously Presented) The combination of claim 4, wherein the pigment is further characterized by two reflection peaks, one each on either side of and adjacent to the reflection gap that matches one of the narrow peaks.

8. (Canceled)

9. (Previously Presented) A method for producing a visible change in appearance, comprising the steps of:

applying a pigment to a subject, the pigment having at least one discrete absorption band within a reflective spectrum;

illuminating the subject with a first light source having a visible illumination spectrum encompassing the reflective spectrum of the pigment, whereupon the subject has an appearance that is nominal;

subsequently illuminating the subject with a second light source characterized by a visible illumination spectrum with discrete illumination bands, wherein at least one of the illumination bands overlaps the absorption band of the pigment, thereby visibly changing the appearance of the subject to be different than nominal.

10. (Original) The method of claim 9, wherein the discrete illumination bands of the second light source include primary color wavelengths having peak amplitudes.

11. (Previously Presented) The method of claim 10, wherein the primary color wavelengths include red, blue and green visible wavelengths and the at least one absorption band of the pigment overlaps at least one of the primary color wavelengths.

12. (Previously Presented) The method of claim 11, wherein the absorption band of the pigment and the illumination bands of the illumination spectrum each comprise a primary color wavelength having a full width half maximum bandwidth of about 10 nm.

13. (Previously Presented) The method of claim 12, wherein the illumination spectrum includes red, green and blue illumination bands and the absorption band of the pigment includes one of a red, green and blue band overlapping a corresponding one of the illumination bands.

14. (Original) The method of claim 13, wherein the overlapping band is a green band.

15. (Original) The method of claim 13, wherein the overlapping band is a blue band.

16. (Previously Presented) The method of claim 13, comprising producing the pigment of the subject by incorporating in a surface of the subject at least one rare earth composition having at least one characteristic absorption band corresponding substantially to wavelengths of at least one of about 440 nm (blue), 545 nm (green) and 611 nm (red).

17. (Previously Presented) The method of claim 16, wherein the at least one characteristic absorption band and the corresponding illumination band are provided by discrete spectral peaks having a full width half maximum bandwidth of about 10 nm.

18. (Previously Presented) The combination of claim 1, wherein the pigment is applied to the subject as a surface coating.

19. (Previously Presented) The combination of claim 1, wherein the pigment is applied to the subject by incorporating the pigment into the subject.

20. (Previously Presented) The combination of claim 1, wherein the pigment is applied to the subject as an identifying indicia.

21. (Previously Presented) The method of claim 13, wherein applying the pigment to the subject includes applying the pigment as a surface coating.

22. (Previously Presented) The method of claim 13, wherein applying the pigment to the subject includes incorporating the pigment into the subject.

23. (Previously Presented) The method of claim 13, wherein applying the pigment to the subject includes applying the pigment as an identifying indicia.